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EXAMINER	
KARIMI, PEGEMAN	
ART UNIT	PAPER NUMBER
2629	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/522,747	FURUHASHI ET AL.	
	Examiner	Art Unit	
	PEGEMAN KARIMI	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 09/24/2009 has been entered and considered by the examiner.

Claim Objections

2. Claims 1, 3, 4, 6-12 are objected to because of the following informalities:

Claim 1 would be read better if the limitation is changed to read "wherein sampling of angular velocity values of the pointing device are performed at sampling cycles of predetermined time intervals, and wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive said cycles of sampling, selection marker is moved to the menu item.

Claim 3 would be read better if the limitation is changed to read "wherein sampling of angular velocity values of the pointing device are performed at sampling cycles of predetermined time intervals, and wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive said cycles of sampling, the image is panned a predetermined distance.

Claim 4 would be read better if the limitation is changed to read "wherein sampling of angular velocity values of the pointing device are performed at sampling cycles of predetermined time intervals, and wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of

successive said cycles of sampling, the sub-screen is moved or enlarged a predetermined distance.

Claim 6 would be read better if the limitation is changed to read "wherein sampling of angular velocity values of the pointing device are performed at sampling cycles of predetermined time intervals, and wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive said cycles of sampling, the curser or pointer is moved by a predetermined distance.

Claim 7 would be read better if the limitation is changed to read "wherein sampling of angular velocity values of the pointing device are performed at sampling cycles of predetermined time intervals, and wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive said cycles of sampling, the rate at which the pointer is changed a predetermined amount.

Claims 8-11 would be read better if the limitation is changed to read "wherein sampling of angular velocity values of the pointing device are performed at sampling cycles of predetermined time intervals, and wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive said cycles of sampling, the object is changed a predetermined amount.

Claim 12 would be read better if the limitation is changed to read "wherein sampling of angular velocity values of the pointing device are performed at sampling cycles of predetermined time intervals, and wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive said cycles of sampling, the rate at which the pointer position moves is changed a predetermined amount.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 6, 7, and 8-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (U.S. Patent No. 5,453,758) in view of Takinami (U.S. Patent No. 6,016,110).

As to claim 1, Sato teaches a pointing device (10) equipped with means for detecting angular velocities (1y and 1x, Fig. 7) in horizontal and vertical directions (col. 5, lines 45-49) and

means (8) for transmitting detected angular velocity information (col. 4, lines 13-16) and

an image display device (24) having means (21, Fig. 5) for receiving angular velocity information (movement of the pointing device) transmitted from the pointing device (10), (col. 4, lines 29-32) and equipped with a function of moving a selection marker (Cursor K, col. 4, lines 45-47) across a plurality of menu items (menu of TV, CD, and VTR, Fig. 6) arranged in vertical and horizontal directions (menu items of Fig. 6 are arranged in a vertical and horizontal direction) and

displayed on a screen in accordance with the received angular velocity information (col. 4, lines 42-47),

the display apparatus (24) for presentation characterized by provision of means (7) for determining a menu item (col. 4, lines 48-53) to which the selection marker (cursor K) should be moved (determining the menu item of playback) in accordance with the duration of sampling the angular velocities (Fig. 2) during which the move distance (up or down) of the pointing device (1) obtained for every sampling cycle from said angular velocity information exceeds a predetermined value continuously (when the pointing device 1 exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd, the cursor is moved in a direction),

wherein sampling of angular velocity values of the pointing device (the angular velocity value between the intervals of Vc and Vd, Fig. 2),

Sato does not mention the sampling values are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device

exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the selection marker is moved to the menu item.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater velocity),

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the cursor to choose a menu option on the screen, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

As to claim 3, Sato teaches a display apparatus for presentation (Fig. 15) comprising:

a pointing device (10) equipped with means for detecting angular velocities (1x, 1y), (col. 5, lines 43-49) in horizontal and vertical directions (x direction or y direction) and

means for transmitting detected angular velocity information (44), (col. 8, lines 11-15) and an image display device having means for receiving angular velocity information transmitted from the pointing device (21), (col. 4, lines 29-32) and equipped with a panning function (movement of the curser on the screen) of moving an image displayed on a screen (curser) in accordance with the received angular velocity information (based on 11x, 11y, and 11z determine the amount of change in the direction based on the change from x direction to y direction and/or to z direction, therefore if a user moves the device from an x direction to a y direction movement the device recognizes the move is in a y direction, col. 6, lines 18-28),

the display apparatus for presentation including provision of means for panning by a distance (movement of the curser from an initial position to a final position) in accordance with a number of cycles of sampling the angular velocities (Fig. 2, a cycle, which is between the voltages Vb and Vc and another cycle, which is between the voltages Vc and Vd wherein the send up code is transmitted) during which a move distance of the pointing device (moving from an initial position to a displacement in the up direction, which is sampled by the sampling means 11x, 11y, and 11z) obtained for every sampling cycle(cycles of Fig. 2) from said angular velocity information (based on the detected angular velocity of 11x, 11y, and 11z) exceeds a predetermined value continuously (when the pointing device exceeds a predetermined value of Vc

continuously in the third sampling cycle, which is located between Vc and Vd the curser is moved in an up direction),

wherein the panning distance over an interval of time increases (the amount of displacement changes (increases) as time passes when the pointing device's angular velocity is in an interval between Vc and Vd) while the number of cycles of sampling (sampled displacement that has the values from interval between Vb and Vc to an interval between Vc and Vd) the angular velocities during which the move distance of the pointing device obtained for every sampling cycle from said angular velocity information exceeds a predetermined value continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd, the curser is moved in a certain direction),

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the image is panned a predetermined distance.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined

time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater rate of velocity) the image is panned a predetermined distance (the curser is panned (moved) as time passes because during each interval the pointer panning (movement) changes because the velocity and time are constant and fixed values, thus the displacement is changed during each interval).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the object (curser) to choose a menu option on the screen or displace (pan) the object (curser) in a certain direction, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

As to claim 6, this claim differs from claim 1, only in that the limitation “equipped with a function of moving a cursor or pointer displayed on a screen” and “means for moving the cursor or pointer by a distance” are additionally recited.

Sato teaches an image display device equipped with a function (Fig. 3) of moving a cursor or pointer (10) displayed on a screen (col. 4, lines 45-47) and means (1x and 1y) for moving the cursor or pointer (moving the cursor in a certain direction of horizontal or vertical), (col. 5, lines 45-49).

wherein the distance over an interval of time increases (As can be seen in Fig. 2 and Fig. 3, the cursor is moved in a certain direction when the angular velocity exceeds a threshold of Vc), (col. 13, lines 3-6) while the number of cycles of sampling the angular velocities during which the move distance of the pointing device obtained for every sampling cycle from said angular velocity information exceeds a predetermined value continuously (as can be seen in Fig. 2, when the angular velocity exceeds the value of Vc the output command is a movement in a certain direction and when the angular velocity exceeds the value of Vb the output command is a movement in another direction).

Sato teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the cursor or pointer is moved by a predetermined distance.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first

step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater velocity),

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the cursor to choose a menu option on the screen, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

As to claim 7, This claim differs from claim 3 only in that the limitation of “a pointing device equipped with a function of moving a pointer displayed on a screen in accordance with the received angular velocity information”, and "changing the rate at which the pointer moves in accordance with a number of cycles of sampling the angular velocities" have been additionally recited.

Sato teaches a pointing device equipped with a function of moving a pointer displayed on a screen in accordance with the received angular velocity information (col. 4, lines 42-47), (wherein the up command and down command are applied by elements 1x and 1y)

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling, the rate at which the pointer moves is changed a predetermined amount.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater rate of velocity) the rate at which the pointer moves is changed a predetermined amount. (the curser is displaced (moved) as time passes because during each interval the curser is moved because the

velocity and time are constant and fixed values, thus the displacement is changed during each interval and the rate of displacement is changed).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato as modified by Okamoto because between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the curser, wherein the user moves the curser in a certain direction, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

As to claim 8, Sato teaches a display system comprising a display device (24) and a pointing device (10) associated with the display device (col. 4, lines 42-47) and for use to operate upon an object (curser) to change displayed on a display screen by said display device (changing the position of the curser on the screen), the display system including:

a position information detecting means (1y and 1x, Fig. 7) for detecting position information (x and y directions) on positions indicated by said pointing device (col. 4, lines 45-49);

a move information sampling means (11x, 11y, and 11z) for sampling a move distance (sensor 11x detects the displacement of the device in the x direction) between

said indicated positions (the initial position and the final destination of the displacement) per unit time (the time it takes for the displacement to take place), based on the position information detected by the position information detecting means (based on the movement detected by the sensors 11x, 11y, and 11z), (col. 6,lines 18-28); and

a change amount determining means (22) for determining the amount of change of said object to change on said display screen (col. 4, lines 61-67), based on a number of cycles of sampling (Fig. 2, a cycle, which is between the voltages Vb and Vc and another cycle, which is between the voltages Vc and Vd wherein the send up-code is transmitted) during which the move distance between said indicated positions (moving from an initial position to a displacement in the up direction) per unit time (time it takes to displace the device at its initial position to a destination position), sampled by the move information sampling means (11x, 11y, and 11z), (col. 6,lines 18-28), exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd the cursor is moved in an up direction), wherein the amount of change of the object over an interval of time increases (the amount of displacement changes (increases) as time passes when the pointing device's angular velocity is in an interval between Vc and Vd)

while the number of cycles (cycle from interval between Vb and Vc to interval between Vc and Vd) of sampling during which the move distance between said indicated positions (from the initial position of the pointing device to the final position of the pointing device) per unit time (time it takes to move from the initial position to the final position), sampled by the move information sampling means (11x, 11y, and 11z),

exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd, the curser is moved in a direction),

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the object is changed a predetermined amount.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater velocity) the object is changed a predetermined amount (the object is moved a predetermined distance based on the elapsed time).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of

taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the object (curser) to choose a menu option on the screen or displace the object (curser) in a certain direction, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

As to claim 9, Sato teaches a pointing device (10) associated with a display device (24), (col. 4, lines 42-47) and for use to operate upon an object (curser) to change displayed on a display screen by the display device (changing the position of the curser on the screen), the pointing device including:

a position information detecting means (1y and 1x, Fig. 7) for detecting position information (x and y directions) on positions indicated by the pointing device (col. 4,lines 45-49),

wherein, based on the position information (based on the movement detected by the sensors 11x, 11y, and 11z), (col. 6, lines 18-28), the position information detecting means (11x, 11y, and 11z) samples a move distance (sensor 11x detects the displacement of the device in the x direction) between said indicated positions (the initial position and the final destination of the displacement) per unit time (the time it takes for the displacement to take place) and

determines the amount of change of said object to change on said display screen (col. 4, lines 61-67), based on a number of cycles of sampling (Fig. 2, a cycle, which is between the voltages Vb and Vc and another cycle, which is between the voltages Vc and Vd wherein the send up code is transmitted) during which the sampled move distance between said indicated positions (moving from an initial position to a displacement in the up direction, which is sampled by the sampling means 11x, 11y, and 11z) per unit time (time it takes to displace the device at its initial position to a displacement in the up direction) exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd the curser is moved in an up direction), and the amount of change of the object over an interval of time increases (the amount of displacement changes (increases) as time passes when the pointing device's angular velocity is in an interval between Vc and Vd) while the number of cycles (cycles from interval between Vb and Vc to interval between Vc and Vd) of sampling during which the sampled move distance between said indicated positions (from the initial position of the pointing device to the final position of the pointing device) per unit time (time it takes to move from the initial position to the final position) exceeds a threshold continuously (when the pointing device exceeds a [predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd, the curser is moved in a certain direction),

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the object is changed a predetermined amount.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater velocity) the object is changed a predetermined amount (the object is moved a predetermined distance based on the elapsed time).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the object (curser) to choose a menu option on the screen or displace the object (curser) in a certain direction, but this time the movement

is possible in increment distances based on time and not the amount of movement of the device.

As to claim 10, Sato teaches a display device (24) associated with a pointing device (10), (col. 4, lines 42-47) for use to operate upon an object (curser) to change on a display screen (changing the position of the curser on the screen), the display device characterized by including:

a change amount determining means (change in position or direction, 11x, 11y, and 11z), wherein, based on position information (x direction or y direction) on positions indicated by said pointing device (col. 4, lines 45-49),

the change amount determining means (11x, 11y, and 11z) samples a move distance (sensor 11x detects the displacement of the device in the x direction) between said indicated positions (the initial position and the final destination of the displacement) per unit time (the time it takes for the displacement to take place) and determines the amount of change of said object to change on said display screen (the 11x, 11y, and 11z determine the amount of change in the direction based on the change from x direction to y direction and/or to z direction, therefore if a user moved the device from an x direction to a y direction movement the device recognizes the move is in a y direction, col. 6, lines 18-28), based on a number of cycles of sampling (Fig. 2, a cycle, which is between the voltages Vb and Vc and another cycle, which is between the voltages Vc and Vd wherein the send up code is transmitted) during which the sampled move distance between said indicated positions (moving from an initial position o a

displacement in the up direction, which is sampled by the sampling means 11x, 11y, and 11z) per unit time (time it takes to displace the device at its initial position to a displacement in the up direction) exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd the cursor is moved in an up direction), wherein

the amount of change of the object over an interval of time continuously increases (the amount of displacement changes (increases) as time passes when the pointing device's angular velocity is in an interval between Vc and Vd) while the number of cycles of sampling (sampled displacement that has the values from interval between Vb and Vc to an interval between Vc and Vd) during which the sampled move distance between said indicated positions per unit time exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd, the curser is moved in a certain direction),

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the object is changed a predetermined amount.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first

step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater velocity) the object is changed a predetermined amount (the object is moved a predetermined distance based on the elapsed time).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the object (curser) to choose a menu option on the screen or displace the object (curser) in a certain direction, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

As to claim 11, Sato teaches a display system comprising a display device (24) and a pointing device (10) associated with the display device (col. 4, lines 42 -47) and for use to operate upon an object (curser) to change displayed on a display screen by

said display device (changing the position of the curser on the screen), the display system including:

an angular velocity detecting means (1y and 1x, Fig. 7) for detecting angular velocity information on positions indicated by said pointing device (col. 5, lines 45-49);

a move information sampling means (11x, 11y, and 11z) for sampling a move distance between said indicated positions (movement from the initial position to the final destination of the displacement, wherein sensor 11x detects the displacement of the device in the x direction) per unit time (the time it takes for the movement to initiate and end), based on the angular velocity information detected by the angular velocity detecting means (col. 4, lines 42-47, wherein the up command and down command are generated by the angular velocity detecting means 11y and 11x); and

a change amount determining means (22) for determining the amount of change of said object to change on said display screen (col. 4, lines 61-67), based on a number of cycles of sampling (Fig. 2, a cycle, which is between the voltages Vb and Vc and another cycle, which is between the voltages Vc and Vd wherein the send up-code is transmitted) during which the move distance between said indicated positions (moving from an initial position to a displacement in the up direction) per unit time (time it take to displace the device at its initial position to a destination position), sampled by the move information sampling means (11x, 11y, and 11z), (col. 6, lines 18-28), exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd the curser is moved in an up direction), wherein the amount of change of said object over an

interval of time increases (the amount of displacement changed (increases) as time passes when the pointing device's angular velocity is in an interval between Vc and Vd) while the number of cycles (cycle from interval between Vb and Vc to interval between Vc and Vd) of sampling during which the move distance between said indicated positions (from the initial position of the pointing device to the final position of the pointing device) per unit time (time it takes to move from the initial position to the final position), sampled by the move information sampling means (11x, 11y, and 11z), exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd, the curser is moved in a direction),

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the object is changed a predetermined amount.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive

cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater velocity) the object is changed a predetermined amount (the object is moved a predetermined distance based on the elapsed time).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the object (curser) to choose a menu option on the screen or displace the object (curser) in a certain direction, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

As to claim 12, Sato teaches a display system comprising a display device (24) and a pointing device (10) associated with the display device (col. 4, lines 42-47) and for use to move a pointer (curser) position pointing on a display screen displayed by said display device (changing the position of the curser on the screen), the display system including:

a position information detecting means (1y and 1x, Fig. 7) for detecting position information (x and y directions) on positions indicated by said pointing device (col. 4, lines 45-49);

a move information sampling means (11x, 11y, and 11z) for sampling a move distance (sensor 11x detects the displacement of the device in the x direction) between said indicated positions (the initial position and the final destination of the displacement) per unit time (the time it takes for the displacement to take place), based on the position information detected by the position information detecting means (based on the movement detected by the sensors 11x, 11y, and 11z), (col. 6, lines 18-28); and

a move distance determining means (22) for determining a distance by which said pointer position should be moved (col. 4, lines 61-67), based on a number of cycles of sampling (Fig. 2, a cycle, which is between the voltages Vb and Vc and another cycle, which is between the voltages Vc and Vd wherein the send up-code is transmitted) during which the move distance between said indicated positions (moving from an initial position to a displacement in the up direction) per unit of time (time it takes to displace the device at its initial position to a destination position), sampled by the move information sampling means (11x, 11y, and 11z), (col. 6, lines 18-28), exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd the curser is moved in an up direction), wherein the distance over an interval of time increases (the amount of displacement changes (increases) as time passes when the pointing device's angular velocity is in an interval between Vc and Vd) while the number

of cycles (cycle from interval between Vb and Vc to interval between Vc and Vc) of sampling during which the move distance between said indicated positions (from the initial position of the pointing device to the final position of the pointing device) per unit of time (time it takes to move from the initial position to the final position), sampled by the move information sampling means (11x 11y, and 11z), exceeds a threshold continuously (when the pointing device exceeds a predetermined value of Vc continuously in the third sampling cycle, which is located between Vc and Vd, the curser is moved in a certain direction),

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato does not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the rate at which the pointer position moves is changed a predetermined amount.

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive

cycle ends and a new cycle starts, having a greater rate of velocity) the rate at which the pointer position moves is changed a predetermined amount (the rate of the pointer position moving changes as time passes because during each interval the pointer movement rate of speed changes).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the cursor to a menu item as can be seen in Fig. 6 of Sato, wherein the user moves the object (curser) to choose a menu option on the screen or displace the object (curser) in a certain direction, but this time the movement is possible in increment distances based on time and not the amount of movement of the device.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Okamoto (U.S. Patent No. 5,502,461), and further in view of Takinami.

As to claim 4, this claim differs from claim 3 only in that the limitations of "the pointing device is equipped with a picture-in-picture function to move or enlarge a sub-screen displayed on a screen in accordance with the received angular velocity information", "moving or enlarging the sub-screen by a distance in accordance with a

number of cycles of sampling", and "the distance moving or enlarging the sub-screen over an interval of time increases" have been additionally recited.

Okamoto teaches image display equipped with a picture-in-picture function (Fig. 9) to move or enlarge a sub-screen displayed on a screen (enlarging the sub-screen 22, Fig. 10)

including moving or enlarging the sub-screen by a distance (enlarging the screen by for example a distance between point P and point P2 in Fig. 9),

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the enlarging the menu of Okamoto to the display apparatus and cursor movement of Hashimoto because the user can enlarge the menu by changing the cursor's position by a distance based on a time interval so that the user can easily adjust and control the menu size to his/her desired size.

Sato further teaches moving a curser (image) based on the received angular velocity from the angular velocity sampling means (1x and 1y), (col. 5, lines 43-49).

Also the image display can be enlarged when the angular velocity falls in an interval (i.e. between Vc and Vd) by dragging the edge of the sub-screen from point P to P2 wherein as time passes the sub-screen's size is enlarged because the sub-screen's edge is dragged a certain distance.

Sato also teaches sampling of angular velocity values (when the sampled angular velocity has a value between Vc and Vd interval).

Sato and Okamoto doe not mention the sampling values of the pointing device are performed at cycles of predetermined time intervals, wherein if the move distance of

the pointing device exceeds a fixed value predetermined threshold for a predetermined number of successive cycles of sampling the sub-screen is moved or enlarged a predetermined distance

Takinami teaches cycles of predetermined time intervals (Fig. 2, wherein the cycles are the steps), and wherein if the move distance (the move distance of the first step, the move distance of the second step, and the move distance of the third step) of the pointing device exceeds a fixed value predetermined threshold (at each predetermined time interval the scroll speed changes, wherein when a predetermined time is reached the scroll speed increases) for a predetermined number of successive cycles of sampling (when the first predetermined time is reached the first successive cycle ends and a new cycle starts, having a greater rate of velocity) the sub-screen is moved or enlarged a predetermined distance (the screen is scrolled (moved) as time passes because during each interval the screen is scrolled (moved) because the velocity and time are constant and fixed values, thus the displacement is changed during each interval).

Therefore by combining the scroll speed changing at a plurality of steps based on elapse of a predetermined time of Takinami to the angular velocity movement of Fig. 2 of Sato as modified by Okamoto because between the intervals of Vc and Vd the user may overcome the disadvantage of taking too long to move the cursor from one position to another position. Thus by adding this benefit to the device of Sato every time the angular velocity reaches the interval between Vd and Vc the user can move the screen, wherein the user moves the screen in a certain direction, but this time the movement is

possible in increment distances based on time and not the amount of movement of the device.

Allowable Subject Matter

6. Claims 2 and 5 are allowed.

Response to Arguments

7. Based on a newly added reference of Takinami (U.S. Patent No. 6,016,110) the newly added limitations to claims 1, 3, 6-12 are rejected.

Examiner by combining the reference of Takinami, which teaches changing the scroll speed based on a predetermined time wherein after the elapse of a predetermined time the rate of speed changes with the reference of Sato, which teaches curser movement on the screen with a pointing device based on the angular movement of the pointing device. By adding the step by step changing the rate of speed based on predetermined time (Fig. 2) of Takinami to the interval of angular velocity between the voltages Vc and Vd of Sato, wherein it can be concluded that when the user moves the pointing device of Sato and the angular velocity falls between the intervals of Vc and Vd the curser can move step by step based on predetermined time intervals (based on Takinami's teaching) as long as the angular velocity is between the intervals of Vc and Vd. Therefore by combining the two references of Sato and Takinami one skilled in the art would arrive at a useful and tangible result, wherein the movement of the curser on the screen depends on the elapse of time and not on the distance the pointing device is moved.

The elements 1x and 1y are similar to the elements 11x, 11y, and 11z were in the elements detect position information of x, y, and z directions and sample a move distance wherein the sensor 11x detects the displacement of the device in the x direction between said indicated positions, which is the initial position and the final destination of the displacement.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PEGEMAN KARIMI whose telephone number is (571)270-1712. The examiner can normally be reached on Monday-Thursday 9:00am - 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Pegeman Karimi/
Examiner, Art Unit 2629
November 21, 2009

/Chanh Nguyen/
Supervisory Patent Examiner, Art Unit 2629